OCCUPATIONAL INJURIES AND DISEASES IN **ALBERTA**

Lost-Time Claims, Disabling Injury Claims and Claim Rates

Young Workers

2004 to 2008

Summer 2009

WORK SAFE ALBERTA

Government of Alberta

Employment and Immigration

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HIGHLIGHTS

In 2008, young workers continued to be injured at a higher proportion than other workers.

- In 2008, the Workers' Compensation Board (WCB) – Alberta accepted 5,550 lost-time claims and 12,855 disabling injury claims from workers aged 15 to 24, a decrease of 16.5% and 9.2% from 2007.
- Young workers accounted for 17.7% of lost-time claims in 2008, 21.2% of the disabling injury claims and 17.0% of those in employment.
- By major industry sector, the Wholesale and Retail sector had the largest number of lost-time claims from young workers, followed by the Construction and Construction Trade Services sector. The Construction and Construction Trade Services sector had the largest number of disabling injury claims from young workers.
- When taking into account the number of young workers in employment, every sector, except the Wholesale and Retail sector had an estimated lost-time injury claim frequency and disabling injury claim frequency higher than older workers.
- The Transportation, Communication and Utilities sector had the highest estimated lost-time injury claim and disabling injury claim frequency for young workers, at 3.66 per 100 young workers and 8.82 per 100 young workers.
- Of the specific WCB industries, the Restaurant/Take Out Food Services industry (in the Wholesale and Retail sector) had the largest number of lost-time claims from young workers in 2008, 368 lost-time claims, followed by Food/Convenience Stores industry (also Wholesale and Retail sector), 356. For disabling injury claims the Food/Convenience Stores industry had the highest number with 739 disabling injury claims, followed by the Industrial Construction industry, 634.
- In 2008, young workers employed in the trades helpers, construction, and transportation labourers and related occupations group accounted for the highest proportion of lost-time claims and disabling injury claims, 17.4% and 19.2%. They represented 5.4% of all young workers in employment.
- Sprains, strains and tears continued to be the leading nature of injury, accounting for 44.5% of the disabling injury claims submitted by young workers. However, young workers had a higher relative proportion for disabling injury claims for burns than the average for all workers, indicating a likelihood 1.8 times higher than the average for all workers.
- The back (including spine and spinal cord) was the most commonly injured body part, accounting for 19.9% of all disabling injury claims. Disabling injury claims connected with the fingers or fingernails however, displayed a relative proportion that

was 1.6 times higher than the average for all workers. Injuries to the wrists and hands also displayed relative proportion that was 1.6 times higher than the average for all workers.

- The primary sources of injury causing disabling injury claims were persons, plants, animals and minerals, accounting for 20.5% of all disabling injury claims, followed by parts and materials, 17.6%. Compared to the average for all sectors in the province however, the injury category hand tools - nonpowered displayed a relative proportion that was 1.7 times higher than the average for all workers. Machinery displayed a relative proportion that was 1.5 times higher than the average for all workers.
- In 2008, the most common type of event or exposure was contact with objects and equipment, which accounted for 39.4% of disabling injury claims to young workers. Struck by object displayed a relative proportion of disabling injury claims that was 1.7 times higher than the average for all workers.
- In 2008, the median work days lost for young workers was five, the same as in 2007. This was lower than the median for all workers, seven days. The average days lost remained unchanged in 2008 at 15 days lost per claim, lower than the average for all workers, 22 days lost.
- In 2008, the WCB accepted eight occupational fatalities from young workers, representing 4.8% of all workplace fatalities accepted in Alberta.

Over the last five years...

- From 2004 to 2008, there were 33,603 lost-time claims from workers aged 15 to 24, accounting for 19.5% of lost-time claims from all workers.
- The WCB accepted 43 fatalities from workers aged 15 to 24 from 2004 to 2008. The Construction and Construction Trade services sector had the most with 14 fatalities. This was followed by the Transportation, Communication and Utilities sector with 11 fatalities.

A few notes about this report:

- This report presents 2008 data beside 2007 data to help with comparisons. Additional historical data are presented where possible.
- Information presented in this report is based on incidents that occurred during 2008 and accepted as lost-time or modified work claims by WCB as of March 31, 2009.
- About 80% of employed persons in Alberta are covered by WCB. This report focuses on all industry activity in Alberta covered by the WCB and by the provincial legislation for occupational health and safety. Most industry sectors are included but notable exceptions consist of the Government of Canada, and parts of the agriculture and finance sectors. Several professional groups (i.e. the teaching and medical professions) are also excluded as are some industries where WCB coverage is not compulsory.
- Injury claim rates based on a small number of person-years worked are too volatile to make valid comparisons over time. Therefore, claim rates are not calculated when there are fewer than 40 person-years worked. Duration rates are also volatile when based on a small number of lost-time claims. Duration rates are not calculated when there are fewer than 30 lost-time claims.
- Estimates of year-over-year change for rates presented in this report are calculated using unrounded figures and may not match those produced from rounded figures. Percentages displayed in tables may also not total 100, due to rounding.
- Throughout the report, the lost-time claim rate is the number of lost-time claims per 100 person-years worked, the disabling injury rate is the number of disabling injury claims per 100 person-years worked and the duration rate is the number of days lost per 100 person-years worked. Fatality rates are expressed as the number of fatalities per million person-years worked.
- Analyses by industry are based on WCB industry classification and aggregation. For more information see http://ds.wcb.ab.ca/WCB.RateManual.WebServer/alphaindex.aspx.
- Analyses by occupation group are based on the National Occupational Classification (NOC). The NOC provides a standard list of occupations across the country. For more information see http://www5.hrsdc.gc.ca/NOC.
- Occupational injuries and diseases listed throughout this report are based on the Z795 Coding of Work Injury or Disease Information produced by the Canadian Standards Association (CSA) for categorizing occupational injury and disease. For more information see http://www.shopcsa.ca/onlinestore/GetCatalogItemDetails.asp?mat=2416404.
- Terms, definitions and formulas used throughout this report are described in Appendix A.

INTRODUCTION

Role of the Ministry of Employment and Immigration

The Ministry of Employment and Immigration includes the reporting entity of the Department of Employment and Immigration (E&I). E&I develops and delivers policies, programs and services to foster labour force development; ensure fair, safe and healthy workplaces; and help those in need. The Department also provides leadership for immigration and interprovincial labour mobility policy for the Government of Alberta, and coordinates resources to support the settlement and integration of new Albertans. Occupational Health and Safety Council (OHSC) is an administrative body that performs an advisory function in accordance with the power and authority specified under the Occupation Health and Safety Act.

Occupational Injuries and Diseases in Alberta - Young Workers 2004 to 2008

The Department of Employment and Immigration (E&I) prepares this annual report to provide analysis of workplace health and safety to meet the demand from industry and safety associations, labour organizations, employers and workers for incorporating this information into their strategic plans for enhancing workplace health and safety. This includes:

- descriptions of programs and initiatives undertaken in pursuit of its workplace health and safety mission and goals;
- analysis of provincial occupational injury and disease information;
- estimations of the risk of injury or disease at the provincial, industry sector and sub-sector level as well as general descriptions about the incidents and injured workers.

The *Occupational Injuries and Diseases in Alberta* publications present analysis of aggregate injury claim data to allow for the tracking of workplace health and safety performance over time. This is important for evaluating past and present performance, and in providing strategic information for the direction of workplace health and safety policy. The analysis contained in this report provides a comprehensive picture of workplace injuries in the province, allowing for a prevention focus to be made based on injury probabilities, rather than possibilities.

Healthy and Productive Workplaces

E&I promotes safe, healthy and productive workplaces, as well as fair, equitable and stable labour relations to ensure a fair, safe and healthy work environment for Alberta's workers.

Work is central to people's lives, to the stability of families and societies. People want work that provides them with an acceptable standard of living. It is important that workers enter an environment where their health and safety is protected, where they are treated with respect and they are compensated fairly for the job they are doing. This results in an attractive workplace that furthers the position of Alberta employers to be competitive in the global economy (see Note 1.1). Alongside the human cost of occupational injuries and diseases and the impact on families and society, the economic costs are numerous.

Note 1.1
Research by the International Institute for Management Development and the World Economic Forum suggests that the safest-working countries also have the best competitiveness ratings ***(ILO, XVIIth World Congress on Safety and Health at Work, Introductory Report: Decent Work-Safe Work, September 2005).***

Direct compensation payments for occupational injury and disease by WCB are projected to total $740 million in 2009.[1] These costs are ultimately paid by employers through premium payments, and impact the costs of running a business as well as the final cost of delivering products and services. Further costs associated with occupational injuries and diseases include the material damage to equipment and premises, the additional cost of hiring staff to cover for injured workers, and the lost productivity resulting from the absence. Additional impacts of poor health and safety for employers include higher absenteeism and the lower morale of employees, loss of skilled experienced employees, loss of the company's investment in training, and difficulty recruiting high-quality employees due to the loss of image (particularly in the case of subcontractors to larger companies) all leading to losses in productivity and underutilization of production (see Note 1.2).

Note 1.2
The International Labour Organization (ILO) estimates that approximately 4% of Gross Domestic Product is lost due to occupational injuries and diseases (*ILO, World Day for Safety and Health at Work 2009 –Facts on safety and health at work issues, April 2009).*

Other costs borne by the economy and society due in part to work-related injuries and diseases include early retirements, unemployment and poorer households. The International Labour Organization (ILO) estimates that in high-income countries, around 40% of all retirements (before statutory age) are caused by disability. This is equivalent to around 14% of the lifetime working capacity of the employed labour force.[2] Occupational injuries and diseases also affect unemployment and household income levels. Workers with an impairment of capacity can reduce their re-employability and impact household income. Workplace injuries and diseases typically reduce the overall earnings of households and in certain cases, family members have to give up jobs in order to care for an injured worker.

[1] See the Workers Compensation Board Alberta 2009 Premium Rate Manual
http://www.wcb.ab.ca/pdfs/employers/09_premium_rate_manual.pdf

[2] See the International Labour Organization report: Safety in numbers – pointers for a global safety culture at work
http://www.ilo.org/public/english/protection/safework/worldday/report_eng.pdf

YOUNG WORKERS SUMMARY

In 2008, the Workers' Compensation Board (WCB) – Alberta accepted 5,550 lost-time claims and 12,855 disabling injury claims from young workers.

In 2008, the Workers' Compensation Board (WCB) – Alberta accepted 5,550 lost-time claims and 12,855 disabling injury claims from young workers (those aged 15 to 24), a decrease of 16.5% and 9.2% from 2007. Claims from young workers accounted for 17.7% of all lost-time claims submitted and 21.2% of all disabling injury claims. The amount of days lost and compensation payments represented 11.9% and 10.9% of the totals respectively.

A lost-time claim is a claim submitted to the WCB for an occupational injury or disease that causes a worker to have time away from work beyond the day of injury. Included are claims receiving reimbursement of full or partial lost wages due to occupational illness or injury, or payment for permanent loss of function (for example, hearing loss).

Table 2.1
Provincial and Young Workers Injury Figures – Alberta: 2008

	All Workers	Young Workers	% of Young Worker Claims
Lost-time claims	**31,410**	**5,550**	**17.7%**
Modified work claims	51,725	11,215	21.7%
Lost-time claims involving modified work	22,443	3,910	17.4%
Disabling injury claims	**60,692**	**12,855**	**21.2%**
Days lost (LTC)	689,523	81,935	11.9%
Compensation payments (LTC)	$211,054,921	$22,969,624	10.9%

Data Source: WCB Data, Prepared by Data Development and Evaluation

A modified work claim is submitted for an occupational injury or disease where workers have their normal work duties altered enabling them to remain working without losing time from work. Included in the figures are claims where injured workers are helped back into the workplace with modified duties after time lost due to injury or disease, and cases where workers were provided modified duties prior to time lost because of an injury or disease.

Modifying an injured worker's duties can be beneficial for both an employer and an employee. For the employer, the financial cost of an absent worker can be high and returning an injured employee to work as soon as it is medically possible is important for properly managing compensation, disability claims and productivity levels. For the employee, returning to work as soon as medically possible is beneficial both physically and psychologically, and is linked to quicker recovery rates and promotion of self-esteem. Long

absences from the workplace are also linked to decreases in labour market attachment.

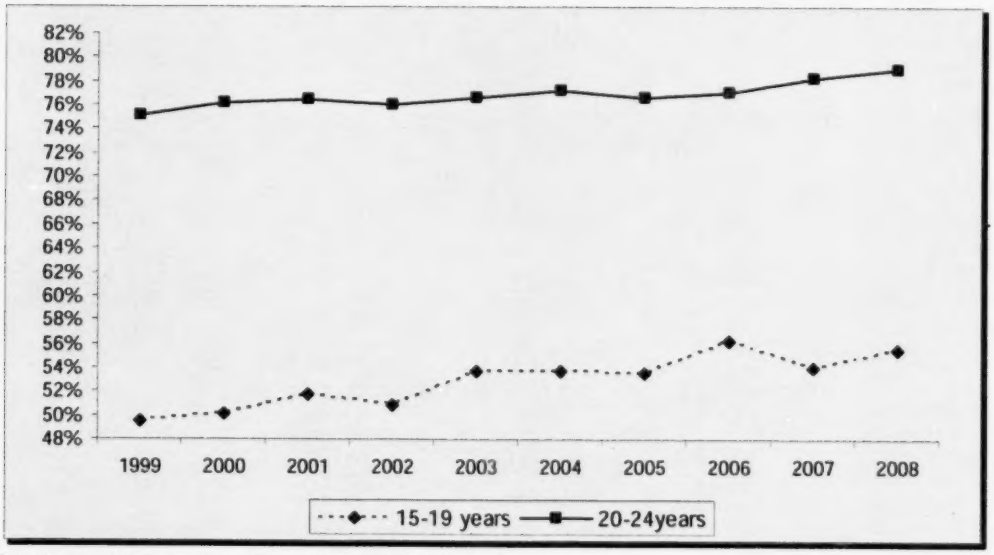
The number of disabling injury claims combines both the lost-time and modified work concepts and produces an overall figure where an occupational injury or disease disables a worker causing either time lost from work or for their normal work duties to be modified.

In 2008, Alberta had the second highest proportion of young workers (in its working age population) of all provinces in Canada. It also had the highest employment rate, the highest participation rate and the lowest unemployment rate for young workers[3].

Over the last ten years, the employment rate for workers aged 15 to 24 has increased from 62.3% in 1999, to 68.0% in 2008, a result of increasing rates for both workers aged 15 to 19 and workers aged 20 to 24 (see Chart 2.1).

Chart 2.1

Employment Rates for Young Workers - Alberta: 1999 - 2008



Statistics Canada's Labour Force Survey (2008 Historical Review)

Over the last ten years, young people aged 15 to 19 comprised approximately 50% of the population aged 15 to 24, and approximately 40% of those in employment. The employment rate for workers aged 15 to 19 increased due to growth in the numbers in employment being greater than the growth in the population. The number of 15 to 19 year olds in employment increased by 23.9% between 1999 and 2008. The population increased by 10.6%. Workers aged 20 to 24 displayed an increase of 33.5% in employment between 1999 and 2008, compared to a population increase of 27.0%.

Young workers are usually active in the education system and have lower education attainment and a higher likelihood of participating in part-time employment than workers

[3] Statistics Canada Labour Force Survey (2008 Historical Review). For more information on young workers in the labour market, see Alberta Labour Force Profiles http://www.employment.alberta.ca/BI/2660.html

of other ages. A third of young workers were employed in part-time positions, 33.3%, compared to 16.2% for all workers. In 2008, 29.9% of young workers were high school graduates, and 16.7% had completed post-secondary education. For all workers, 22.9% of those employed were high school graduates and 33.3% of Alberta's working population had completed post-secondary levels of education.

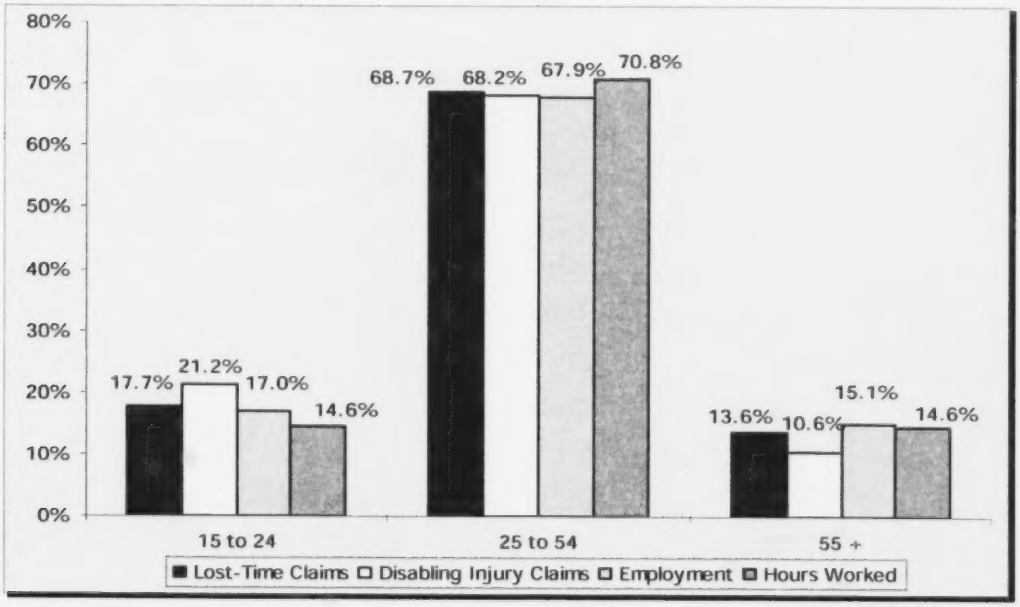
DEMOGRAPHICS OF INJURED WORKERS

In 2008, young workers represented 17.0% of those employed in Alberta and accounted for 17.7% of lost-time claims and 21.2% of disabling injury claims.

Compared to older workers, young workers display a higher likelihood of getting injured. In 2008, young workers accounted for 17.0% of those employed in Alberta and accounted for 17.7% of the total lost-time claims and 21.2% of disabling injury claims. In contrast, workers aged 55 and older represented 15.1% of those employed, 13.6% of the total lost-time claims and 10.6% of disabling injury claims (see Chart 3.1).

Chart 3.1

Proportion of Injury Claims, Employment and Hours Worked by Selected Age Groups - Alberta: 2008



Data Source: WCB Data, Prepared by Data Development and Evaluation, Statistics Canada's Labour Force Survey (2008 Historical Review)

Young workers also accounted for 14.6% of the total actual hours worked in the province. Looking at actual hours worked can be a better indicator of the exposure to workplace hazards for more marginal groups in employment, due to differing levels of part-time employment in various industries. It indicates an even higher likelihood of injury for young workers compared to other age groups than employment counts would suggest.

In 2008, there were 1,675 lost-time claims and 3,733 disabling injury claims from young workers aged 15 to 19 (see Table 3.1). This was a decrease from 2007 by 18.1% and 9.3%.

For workers aged 20 to 24, the number of lost-time claims decreased by 15.8% to 3,875 in 2008. The number of disabling injury claims decreased by 9.2% to 9,117.

Estimates of injury and disease severity are calculated using information on the number of days lost from work. In 2008, the median days lost due to injuries or diseases for young workers was five days, two days fewer than the provincial median days lost of seven. The average days lost remained unchanged in 2008, at 15 days lost per claim, lower than the average for all workers, 22 days lost.

Note 3.1

In a national study completed by the Institute for Work and Health (IWH) young workers were often found to accept workplace injuries as "part of the job" because they were frequent and minor. They determined that this perspective is, for the most part, the result of young workers' perceived inability to improve or alter their working conditions.

"Rather than seeing young workers as having faulty or distorted perceptions of risk, we suggest that, by virtue of their subordinate position young workers have little choice but to *accept* certain injuries as part of the job"
(Breslin et al., 2007).

Table 3.1

Proportion of Lost-Time Claims and Disabling Injury Claims by Age Group - Alberta: 2007 to 2008

	2007				2008			
Age	Lost-Time Claims	%	Disabling Injury Claims	%	Lost-Time Claims	%	Disabling Injury Claims	%
Under 15 Years	36	0.1%	48	0.1%	**21**	**0.1%**	**36**	**0.1%**
15 - 19 Years	2,044	6.0%	4,122	6.6%	**1,675**	**5.3%**	**3,738**	**6.2%**
20 - 24 Years	4,602	13.4%	10,040	16.1%	**3,875**	**12.3%**	**9,117**	**15.0%**
25 - 34 Years	7,731	22.6%	15,760	25.2%	**7,125**	**22.7%**	**15,539**	**25.6%**
35 - 44 Years	7,916	23.1%	13,917	22.3%	**7,145**	**22.7%**	**13,436**	**22.1%**
45 - 54 Years	7,686	22.5%	12,483	20.0%	**7,296**	**23.2%**	**12,421**	**20.5%**
55+ Years	4,212	12.3%	6,103	9.8%	**4,273**	**13.6%**	**6,405**	**10.6%**
Unspecified	0	N/A	0	N/A	**0**	**N/A**	**0**	**N/A**
Total	34,227	100.0%	62,473	100.0%	**31,410**	**100.0%**	**60,692**	**100.0%**

Data Source: WCB Data, Prepared by Data Development and Evaluation

From 2004 to 2008, there were 33,603 lost-time claims from young workers aged 15 to 24. Workers aged 20 to 24 accounted for 69.0% of those lost-time claims. Workers aged 15 to 19 years accounted for 31.0%.

Gender

More claims from young workers were from men than women. In 2008, 71.2% of lost-time claims and 76.2% of disabling injury claims from young workers involved men, who accounted for 53.4% of those in employment in this age group. In contrast, women accounted for 28.8% of lost-time claims, 23.8% of disabling injury claims and 46.6% of those in employment (see Chart 3.2). For workers of all ages, men accounted for 66.1% of lost-time claims, 72.3% of disabling injury claims and 55.4% of those in employment, while women accounted for 44.6% of those in employment 33.9% of the lost-time claims and 27.7% of the disabling injury claims.

Note 3.2
Focus group research completed by the IWH found that employers and workers responded differently to injuries and conditions on the workplace relative to their gender.

Researchers found women in their study often found their complaints "delegitimized", or dismissed, by their employers. In contrast, the IWH found men "stifled", or muted, their injuries in order to advance their positions at work (Breslin et al., 2006).

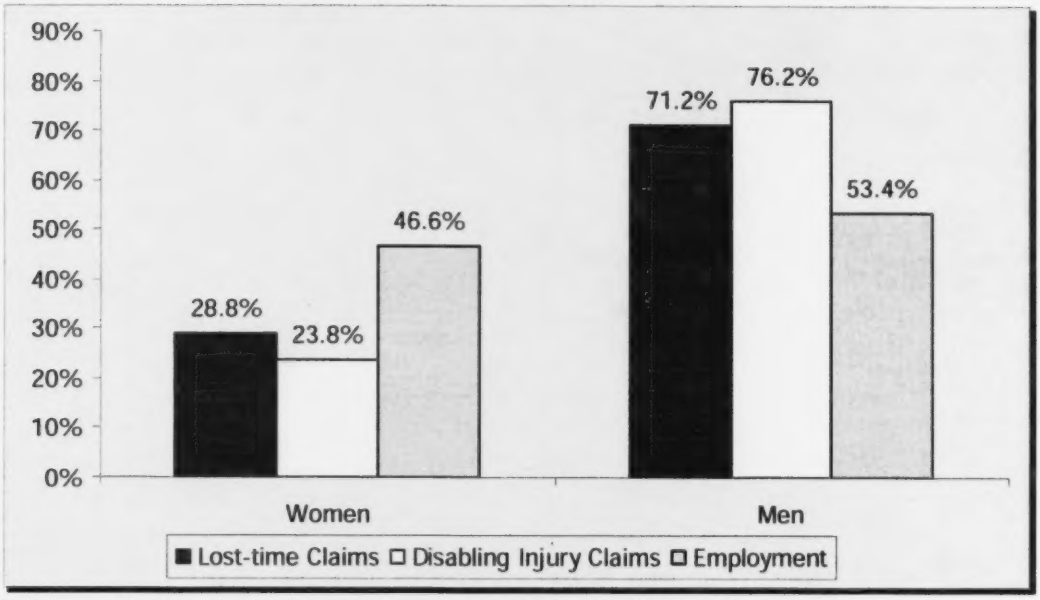
There is a greater difference in injuries across genders in young workers than there is with workers of all ages. This is likely the result of the different types of work women and men perform and the gender delineated attitudes and roles they bring to the workplace (see Notes 3.1 and 3.2).

Table 3.2
Lost-Time Claims and Disabling Injury Claims by Gender - Young Workers, Alberta: 2007 to 2008

Gender	2007				2008			
	Lost-Time Claims	%	Disabling Injury Claims	%	Lost-Time Claims	%	Disabling Injury Claims	%
Women	1,830	28.1%	3,242	23.4%	1,601	28.8%	3,031	23.8%
Men	4,671	71.9%	10,635	76.6%	3,949	71.2%	9,720	76.2%
Unspecified*	145	N/A	285	N/A	0	N/A	104	N/A
Total	6,646	100.0%	14,162	100.0%	5,550	100.0%	12,855	100.0%

*Claims with no specified gender have been removed from the proportions.
Data Source: WCB Data, Prepared by Data Development and Evaluation; Statistics Canada's Labour Force Survey (2008 Historical Review)

Chart 3.2
Lost-Time Claims and Disabling Injury Claims by Gender - Young Workers, Alberta: 2008



Data Source: WCB Data, Prepared by Data Development and Evaluation; Statistics Canada's Labour Force Survey (2008 Historical Review)

Occupation

In 2008, young workers employed in the trades helpers, construction, and transportation labourers and related occupations group[4] submitted the highest proportion of lost-time claims and disabling injury claims, 17.4% and 19.2%. They also represented 5.4% of all young workers in employment[5]. In contrast, 15.2% of workers were employed in the sales and service occupations group, yet they accounted for 11.1% of lost-time claims and 9.5% of disabling injury claims (see Table 3.3 and Chart 3.3).

[4] Occupations were coded following the National Occupational Classification for Statistics. See page 2 for further information.
[5] Statistics Canada Labour Force Survey (2008 Historical Review).

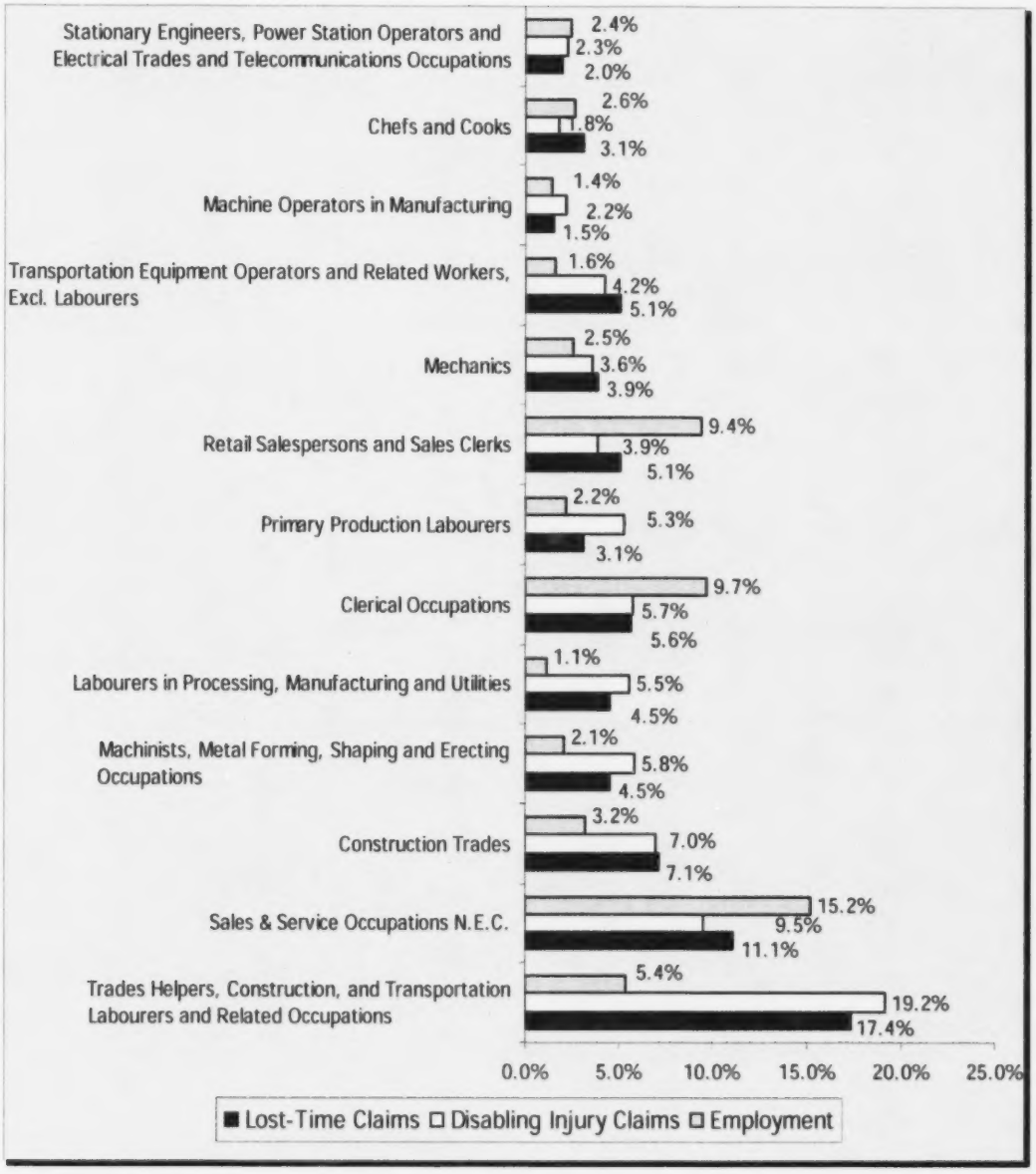
Table 3.3
Lost-Time Claims, Disabling Injury Claims and Employment by Select Occupation Group - Young Workers, Alberta: 2008

Occupation	Lost-Time Claims	Disabling Injury Claims	Employment
Trades Helpers, Construction, and Transportation Labourers and Related Occupations	17.4%	19.2%	5.4%
Sales & Service Occupations N.E.C.*	11.1%	9.5%	15.2%
Construction Trades	7.1%	7.0%	3.2%
Machinists, Metal Forming, Shaping and Erecting Occupations	4.5%	5.8%	2.1%
Labourers in Processing, Manufacturing and Utilities	4.5%	5.5%	1.1%
Clerical Occupations	5.6%	5.7%	9.7%
Primary Production Labourers	3.1%	5.3%	2.2%
Retail Salespersons and Sales Clerks	5.1%	3.9%	9.4%
Mechanics	3.9%	3.6%	2.5%
Transportation Equipment Operators and Related Workers, Excl. Labourers	5.1%	4.2%	1.6%
Machine Operators in Manufacturing	1.5%	2.2%	1.4%
Chefs and Cooks	3.1%	1.8%	2.6%
Stationary Engineers, Power Station Operators and Electrical Trades and Telecommunications Occupations	2.0%	2.3%	2.4%
Total	**5,550**	**12,855**	**342,900**

*Not Elsewhere Classified

Data Source: WCB Data, Prepared by Data Development and Evaluation; Statistics Canada, Labour Force Survey (Microdata Files)

Chart 3.3
Lost-Time Claims, Disabling Injury Claims and Employment by Selected Occupation Groups - Young Workers, Alberta: 2008



Data Source: WCB Data; Statistics Canada, Labour Force Survey (Microdata Files), Prepared by Data Development and Evaluation.

Disabling Injury Claims by Month of Injury

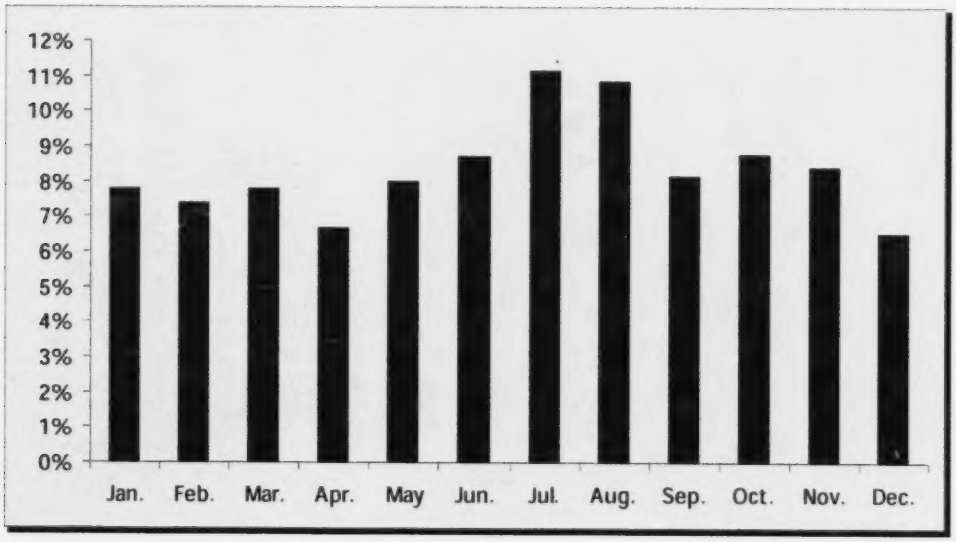
Lost-time claims from workers aged 15 to 24 displayed an increase in the number of injuries occurring to young workers during the summer months.

The number of lost-time claims submitted by workers aged 15 to 19 is greater in the summer months, with July and August accounting for 11.2% and 10.8% of the total lost-time claims from this age group from 2005 to 2008. For workers aged 20 to 24, lost-time claims for July and August accounted for 9.4% and 9.0% of the lost-time claims from 2005 to 2008 (see Charts 3.4a and 3.4b). A partial explanation for this is the increased proportion of young workers aged 15 to 19 employed during the summer months. In 2008, young workers accounted for 18.4% and 18.5% of total employment in July and August, while young workers average 16.9% of total employment[6] in 2008. Workers aged 25 years and over do not share this trend in employment or claims.

Chart 3.4a

Proportion of Disabling Injury Claims by Month of Injury - Young Workers, Alberta: 2005 - 2008

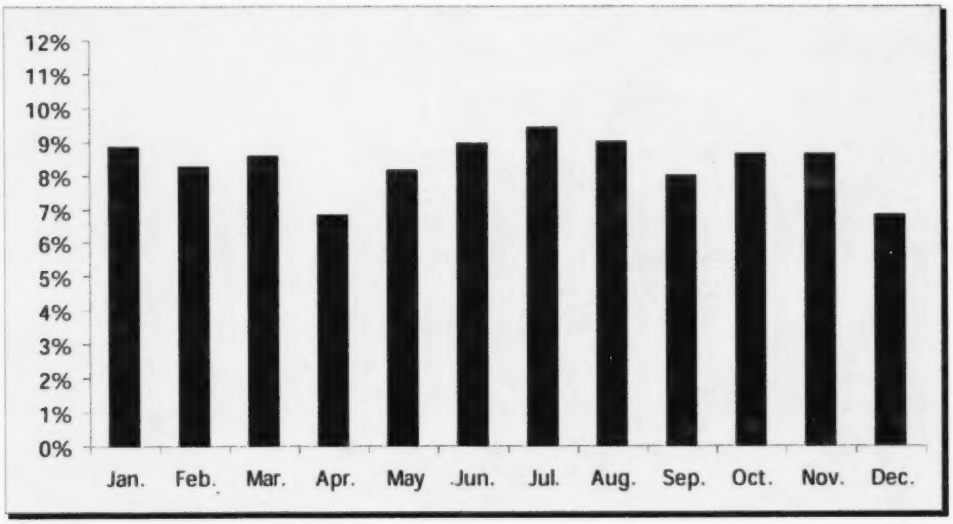
15 to 19 Years:



Data Source: WCB Data, Prepared by Data Development and Evaluation

[6] Data source: Statistics Canada's Labour Force Survey (2008 Historical Review).

Chart 3.4b
Proportion of Disabling Injury Claims by Month of Injury - Young Workers, Alberta: 2005 - 2008
20 to 24 Years:



Data Source: WCB Data, Prepared by Data Development and Evaluation

INDUSTRY SECTOR ANALYSIS

In 2008, four major industry sectors accounted for 77.8% of the lost-time claims from young workers.

Major Industry Sector Analysis

In 2008, there were 1,452 lost-time claims from young workers in the Wholesale and Retail sector (see Table 4.1), representing 26.2% of all lost-time claims. This was followed by the Construction and Construction Trade Services sector, 1,349 lost-time claims, the Business, Personal and Professional Services sector, 796 and the Manufacturing, Processing and Packaging sector, 720. These sectors accounted for 24.3%, 14.3% and 13.0% of all lost-time claims from young workers respectively.

Table 4.1
Lost-Time Claims and Disabling Injury Claims by Major Industry Sector - Young Workers, Alberta: 2008

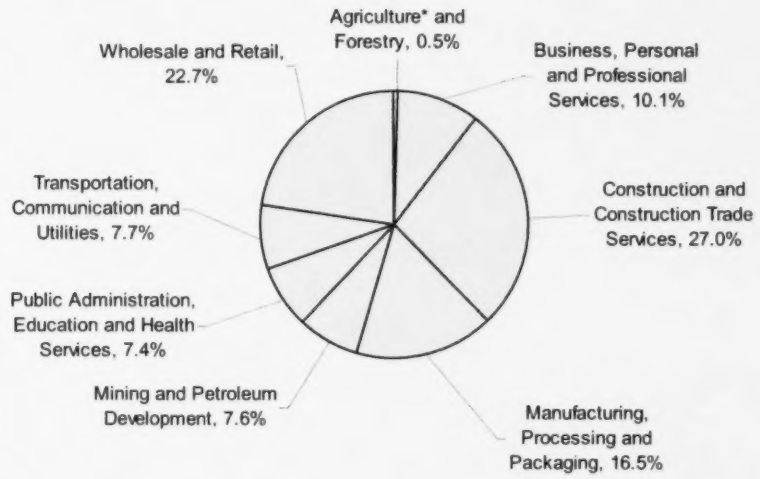
Major Industry Sector	15-19 Years		20-24 Years		Total (15-24 Years)	
	Lost-Time Claims	Disabling Injury Claims	Lost-Time Claims	Disabling Injury Claims	Lost-Time Claims	Disabling Injury Claims
Agriculture* and Forestry	9	13	28	56	**37**	**69**
Business, Personal and Professional Services	319	472	477	822	**796**	**1,294**
Construction and Construction Trade Services	314	815	1,035	2,655	**1,349**	**3,470**
Manufacturing, Processing and Packaging	207	562	513	1,562	**720**	**2,124**
Mining and Petroleum Development	23	181	131	792	**154**	**973**
Public Administration, Education and Health Services	133	232	498	724	**631**	**956**
Transportation, Communication and Utilities	94	241	317	749	**411**	**990**
Wholesale and Retail	576	1,211	876	1,713	**1,452**	**2,924**
Unspecified	0	11	0	44	**0**	**55**
All Industries	**1,675**	**3,738**	**3,875**	**9,117**	**5,550**	**12,855**

* Agriculture in Alberta is largely exempt from mandatory WCB coverage. See note 4.1
Data Source: WCB Data, Prepared by Data Development and Evaluation

For disabling injury claims a similar pattern exists. The same four industry sectors accounted for 76.3% of the disabling injury claims from young workers. The Construction and Construction Trade Services sector had the largest number of disabling injury claims with 3,470 or 27.0%, followed by Wholesale and Retail sector, 2,924, the Manufacturing, Processing and Packaging sector, 2,124, and the Business, Personal and Professional Services sector with 1,294 disabling injury claims from young workers (see

Table 4.1). These three sectors accounted for 22.7%, 16.5%, and 10.1% of young workers' disabling injury claims respectively (see Chart 4.1).

Chart 4.1
Disabling Injury Claims by Industry Sector for Young Workers - Alberta: 2008


Agriculture* and Forestry, 0.5%
Business, Personal and Professional Services, 10.1%
Construction and Construction Trade Services, 27.0%
Manufacturing, Processing and Packaging, 16.5%
Mining and Petroleum Development, 7.6%
Public Administration, Education and Health Services, 7.4%
Transportation, Communication and Utilities, 7.7%
Wholesale and Retail, 22.7%

* Agriculture in Alberta is largely exempt from mandatory WCB coverage. See note 4.1
Data Source: WCB Data, Prepared by Data Development and Evaluation

The number of workers (or person-years worked estimates) calculated in the *Occupational Injuries and Diseases in Alberta Summary* and industry sector reports allow for an analysis of the number of claims to be made with the number of workers in an industry, and are useful for looking at the frequency of injury claims. Person-years worked estimates rely on financial information provided by employers to WCB (see Appendix A). As such, lost-time claims and disabling injury rates can only be produced at an industry level, and not for particular worker demographics, like age.

Note 4.1
Agriculture in Alberta is largely exempt from mandatory WCB coverage and figures are based on WCB covered employers.

The Alberta Associates of Safe Rural Environments reported 757 incidents on farm sites requiring medical attention in 2008. Of these, 12.5% were inflicted on persons under the age of 18 *(FAMS: 2008 Farm Injury Report, 2009).*

The Labour Force Survey however, does allow for employment information to be broken down by age, and can be applied to the injury claim data. Differences in coverage and industry classifications exist between the Labour Force Survey and the WCB industry classification, although it is useful for highlighting sectors where the data indicates a higher proportion or frequency of injury.

Table 4.2 presents the proportion of WCB lost-time and disabling injury claims from young workers compared to the proportion of young workers employed in each industry

sector[7]. In most sectors, young workers had higher proportions of lost-time claims and disabling injury claims than the proportion they represented in employment. The Mining and Petroleum Development sector displayed the largest difference between proportion in employment and proportions of injury claims. Young workers accounted for 18.8% of lost-time claims, 26.6% of disabling injury claims and 12.4% of those in employment in 2008. Young workers in the Transportation, Communication and Utilities sector accounted for 11.8% of lost-time claims, 17.4% of disabling injury claims and 8.7% of those in employment. In contrast, young workers in the Wholesale and Retail sector accounted for 22.8% of lost-time claims and 26.6% of disabling injury claims, lower than their 28.7% proportion of employment.

Table 4.2

Proportion of Lost-Time Claims, Disabling Injury Claims and Employment by Major Industry Sector - Young Workers (15-24 years), Alberta: 2008

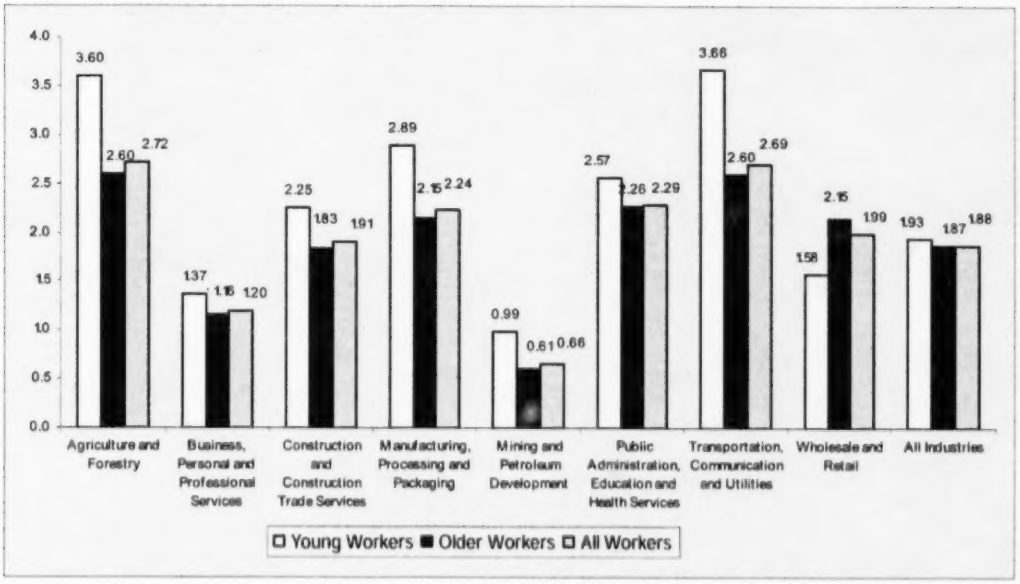
Major Industry Sector	Lost-Time Claims	Disabling Injury Claims	Employment
Agriculture and Forestry	15.2%	21.1%	11.5%
Business, Personal and Professional Services	23.1%	25.2%	20.2%
Construction and Construction Trade Services	22.4%	23.7%	19.0%
Manufacturing, Processing and Packaging	16.5%	18.9%	12.8%
Mining and Petroleum Development	18.8%	26.6%	12.4%
Public Administration, Education and Health Services	9.4%	10.9%	8.4%
Transportation, Communication and Utilities	11.8%	17.4%	8.7%
Wholesale and Retail	22.8%	26.6%	28.7%
All Industries	**17.7%**	**21.2%**	**17.0%**

Data Source: WCB Data, Statistics Canada's Labour Force Survey (2008 Historical Review), Prepared by Data Development and Evaluation

Charts 4.2 and 4.3 apply the proportion of young workers in employment for each major sector, to the WCB person-years worked figures, allowing for an estimation of injury frequency for young workers compared to other workers in a sector. Looking at the proportions in employment alongside injury claims, and estimating injury claim frequency rates shows that although the Wholesale and Retail Sector had the highest number of lost-time claims and second highest number of disabling injury claims, the frequency of injury is lower than in most sectors.

[7] The Labour Force Survey uses a different industry classification to WCB, although there are similarities in structure. Proportions (of totals) have been used to evaluate information generated from both sources. See Appendix A for further information.

Chart 4.2
Estimated* Lost-Time Injury Frequencies for Young Workers – Alberta 2008

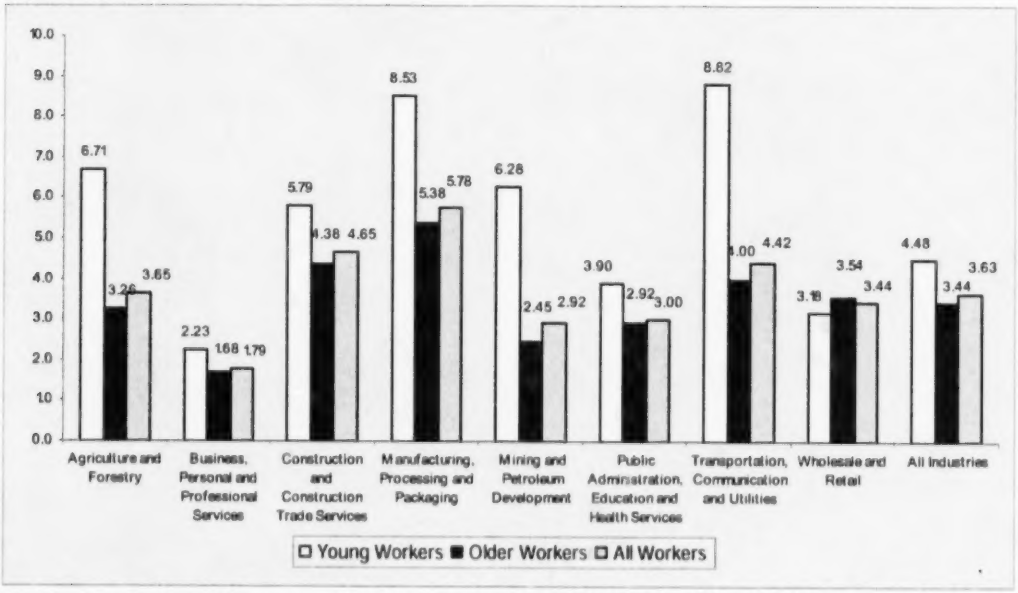


*Lost-time injury frequencies for young workers (those under 25 years) and older workers (those aged 25 and over) are calculated by applying the number of injury claims from young workers to a proportion of WCB person-years worked figures. The proportion is determined using information available from the Labour Force Survey on young workers employed in a particular industry sector. Data Source: Statistics Canada's Labour Force Survey (2008 Historical Review). Prepared by Data Development and Evaluation.

The Transportation, Communication and Utilities had the highest estimated lost-time injury claim frequency at 3.66 per 100 young workers, compared to 2.60 per 100 older workers. This was followed by the Manufacturing, Processing and Packaging at 2.89 per 100 young workers, compared to 2.15 per 100 older workers (see Chart 4.2).

Disabling injury claim frequencies for young workers followed a similar trend. All sectors except the Wholesale and Retail sector had higher disabling injury claim frequencies for young workers than for older workers. The Transportation, Communication and Utilities sector had the highest estimated disabling injury claim frequency for young workers, 8.82 per 100 young workers compared to 4.00 per 100 older workers. The Manufacturing, Processing and Packaging sector had an estimated frequency of 8.53 per 100 young workers, compared to 5.38 per 100 older workers (see Chart 4.3).

Chart 4.3
Estimated* Disabling Injury Frequencies for Young Workers – Alberta 2008



*Disabling injury frequencies for young workers (those under 25 years) and older workers (those aged 25 and over) are calculated by applying the number of injury claims from young workers to a proportion of WCB person-years (worker) figures. The proportion is determined using information available from the Labour Force Survey on young workers employed in a particular industry sector.
Data Source: WCB Data, Statistics Canada's Labour Force Survey (2008 Historical Review), Prepared by Data Development and Evaluation.

Industry Analysis

Of the specific WCB industries, the Restaurant/Take Out Food Services industry had the largest number of lost-time claims for young workers in 2008, 368, followed by Food/Convenience Stores industry, 356, General Trucking Services industry, 182 and the Steel/Metal Fabrication industry, 167.

For disabling injury claims, the Food/Convenience Stores industry had the highest number with 739, followed by Industrial Construction, 634, Steel/Metal Fabrication industry, 548, and Restaurant/Take Out Food Services industry, with 462 disabling injury claims.

Due to the level of detail available in the Labour Force Survey and the differences in coverage and industry classification with WCB, it is not possible to analyze the frequency of injury for young workers by specific industry. However, it is possible to look at the frequency or proportion of lost-time and disabling injury claims from young workers compared to claims from all workers, by specific industry.

Table 4.3 presents the 20 industries with the highest proportion of claims from young workers compared to all workers. The Entertainment Equipment Sale/Services industry

had the highest proportion of lost-time claims and disabling injury claims to young workers with 43.1% and 47.2%.

Table 4.3
Highest Proportions[8] of Lost-Time Claims and Disabling Injury Claims by Industry - Young workers, Alberta: 2008

Industry	Lost-Time Claims			Disabling Injury Claims		
	15-24 years	All Ages	%	15-24 years	All Ages	%
Entertainment Equipment Sale/Services	22	51	43.1%	34	72	47.2%
Tire Retreading	21	52	40.4%	89	192	46.4%
Well Servicing With Service Rigs	32	77	41.6%	222	496	44.8%
Novelty/Gift/Hobby Store, Etc	34	84	40.5%	41	113	36.3%
Furniture Stores	92	238	38.7%	142	379	37.5%
Restaurant/Take-Out Food Services	368	1,098	33.5%	462	1,347	34.3%
Wood Framing	54	163	33.1%	63	189	33.3%
Surveying, Land/General	19	56	33.9%	51	156	32.7%
Steel/Metal Structures - Erect	20	58	34.5%	35	99	35.4%
Landscaping Including Maintenance	58	168	34.5%	98	270	36.3%
Drilling of Oil and Gas Wells	40	140	28.6%	283	707	40.0%
Sheet Metal Shops	26	89	29.2%	56	196	28.6%
Automobile Body Repairs	20	78	25.6%	32	111	28.8%
Alberta Government - Operations/Trades/Tech	19	72	26.4%	54	132	40.9%
Oilfield Maintenance & Construction	29	122	23.8%	101	309	32.7%
General Automotive Repairs	83	275	30.2%	136	398	34.2%
Electric Wiring	101	340	29.7%	251	1,059	23.7%
Roofing	40	144	27.8%	74	258	28.7%
Home Improvement Centers	122	452	27.0%	265	808	32.8%
Construction, Concrete	77	282	27.3%	147	532	27.6%

Data Source: WCB Data, Prepared by Data Development and Evaluation

[8] Industries with less than 50 lost-time claims in 2008 were excluded from this analysis.

INJURY AND DISEASE ANALYSIS

Contact with objects and equipment was the most common cause for lost-time claims and disabling injury claims. Sprains, strains and tears continued to be the leading nature of injury with the trunk the most commonly injured body part.

Nature of Injury or Disease

Nature of injury is used to identify the physical characteristics of the injury or disease. In 2008, for workers of all ages[9], 93.6% of all the lost-time and 94.8% of disabling injury claims were traumatic injuries and disorders.

Note 5.1
Throughout this section, the classifications used are based on the Canadian Standards Association (CSA) standards for categorizing occupational injury and disease information.

For young workers, 96.4% of lost-time claims and 96.7% of disabling injury claims were caused by traumatic injuries and disorders. For lost-time claims, the four most common traumatic injuries and disorders were sprains, strains and tears, 41.5%, open wounds, 13.5%, surface wounds and bruises, 14.6%, and fractures and dislocations, 10.1% (see Table 5.1).

Compared to the average for all workers in the province, young workers had higher relative proportions[10] of lost-time claims and disabling injury claims than the average for all workers in most injury categories. Lost-time claims and disabling injury claims for burns had the highest relative proportions, both 1.8 times higher than the average for all workers. Open wounds had relative proportions 1.7 times higher for both lost-time claims and disabling injury claims. This was followed by surface wounds and bruises at 1.2 and 1.4 times higher than the average for all workers respectively.

Note 5.2
The CSA standard is designed so that Nature of Injury and Part of Body categories are directly linked when classifying injuries. This is also true for the relationship between the Source of Injury and Type of Event categories.

[9] See the *Occupational Injuries and Diseases in Alberta 2008 Summary*.

[10] The relative proportion or number of times higher or lower compares the young workers estimated lost-time injury claim frequency and estimated disabling injury claim frequency and proportion of injuries by each injury type, against the average claim rate and injury proportion for all workers in the province. A value equal to 1 indicates an equal probability or likelihood to the average. A value higher than 1 indicates an increased likelihood of this type of injury occurring, and a value less than one indicates a lower likelihood. See Appendix A for calculation details.

Table 5.1
Nature of Injury or Disease - Young Workers, Alberta: 2008

Nature of Injury	Lost-Time Claims	%	Disabling Injury Claims	%
Traumatic Injuries and Disorders	**5,351**	**96.4%**	**12,428**	**96.7%**
Sprains, Strains and Tears	2,306	**41.5%**	5,720	**44.5%**
Open Wounds	748	**13.5%**	1,839	**14.3%**
Surface Wounds and Bruises	808	**14.6%**	2,023	**15.7%**
Fractures and Dislocations	560	**10.1%**	996	**7.7%**
Burns	235	**4.2%**	400	**3.1%**
Other Traumatic Injuries and Disorders	694	**12.5%**	1,450	**11.3%**
Systemic Diseases and Disorders	**117**	**2.1%**	**270**	**2.1%**
Infectious and Parasitic Disorders	**22**	**0.4%**	**23**	**0.2%**
Symptoms, Signs and Ill-Defined Conditions	**22**	**0.4%**	**42**	**0.3%**
Other Diseases, Conditions and Disorders	**13**	**0.2%**	**15**	**0.1%**
Nature of Injury - Unknown	**24**	**0.4%**	**76**	**0.6%**
Multiple Diseases, Conditions and Disorders	**1**	**<0.1%**	**1**	**<0.1%**
Total	**5,550**	**100.0%**	**12,855**	**100.0%**

Data Source: WCB Data, Prepared by Data Development and Evaluation

Part of Body Injured

For workers of all ages[11], injuries to the trunk accounted for 38.2% of lost-time claims and 36.0% of disabling injury claims in 2008. For young workers, 31.1% of lost-time claims and 30.5% of disabling injury claims were due to injuries to the trunk. This was followed by upper extremities at 27.9% and 34.2% respectively.

In 2008, injuries to the fingers and fingernails had the highest relative proportions[12] of lost-time claims and disabling injury claims for young workers than the average for all workers, 1.5 and 1.6 times higher respectively. Injuries to the wrists and hands displayed relative proportions that were 1.4 and 1.6 times higher for lost-time claims and disabling injury claims. This was followed by injuries to the ankles and feet except toes, 1.4 and 1.5 times higher than the average for all workers respectively.

[11] See the *Occupational Injuries and Diseases in Alberta 2008 Summary*.

[12] The relative proportion or number of times higher or lower compares the young workers estimated lost-time injury claim frequency and estimated disabling injury claim frequency and proportion of injuries by each injury type, against the average claim rate and injury proportion for all workers in the province. A value equal to 1 indicates an equal probability or likelihood to the average. A value higher than 1 indicates an increased likelihood of this type of injury occurring, and a value less than one indicates a lower likelihood. See Appendix A for calculation details.

Table 5.2
Part of Body Injured - Young Workers, Alberta: 2008

Part of Body Injured	Lost-Time Claims	%	Disabling Injury Claims	%
Trunk	**1,724**	**31.1%**	**3,925**	**30.5%**
Back, Including Spine, Spinal Cord	1,200	21.6%	2,562	19.9%
Other Trunk	524	9.4%	1,363	10.6%
Upper Extremities	**1,548**	**27.9%**	**4,395**	**34.2%**
Finger(s), Fingernail(s)	628	11.3%	1,868	14.5%
Wrist(s) and Hand(s) Except Finger(s)	642	11.6%	1,717	13.4%
Other Upper Extremities	278	5.0%	810	6.3%
Lower Extremities	**1,316**	**23.7%**	**2,814**	**21.9%**
Ankle(s) and Foot (Feet) Except Toes	707	12.7%	1,526	11.9%
Leg(s)	552	9.9%	1,184	9.2%
Other Lower Extremities	57	1.0%	104	0.8%
Head	**543**	**9.8%**	**976**	**7.6%**
Other Head Parts	324	5.8%	557	4.3%
Eye(s)	219	3.9%	419	3.3%
Multiple Body Parts	**262**	**4.7%**	**433**	**3.4%**
Neck, Including Throat	**98**	**1.8%**	**223**	**1.7%**
Body Systems	**51**	**0.9%**	**78**	**0.6%**
Part of Body - Unknown	**7**	**0.1%**	**9**	**0.1%**
Other Body Parts	**1**	**<0.1%**	**2**	**<0.1%**
Total	**5,550**	**100.0%**	**12,855**	**100.0%**

Data Source: WCB Data, Prepared by Data Development and Evaluation

Source of Injury or Disease

Source of injury or disease describes the object or substance that the worker came into contact with that resulted in an injury or disease. Four primary sources of injury accounted for more than half of the total lost-time claims and disabling injury claims from young workers in 2008. For lost-time claims these sources were persons, plants, animals and minerals, 20.6%, structures and surfaces, 15.4%, parts and materials, 14.2%, and containers, 11.3% (see Table 5.3). Injuries to workers of all ages[13] came from similar sources although the same four sources accounted for over 25.2%, 11.4%, 19.0% and 10.4% of the lost-time claims respectively.

In 2008, injuries caused by hand tools - nonpowered displayed the highest relative proportions[14] of lost-time claims and disabling injury claims for young workers than the average for all workers, 1.7 times higher for both. This was followed by machinery, 1.4 and 1.5 times higher than the average for all workers. Injuries caused by parts and materials displayed relative proportions 1.3 times and 1.5 times higher for lost-time claims and disabling injury claims. Other persons, plants, animals and minerals displayed relative proportions 1.3 and 1.4 times higher than the average for all workers.

[13] See the *Occupational Injuries and Diseases in Alberta 2008 Summary*.

[14] The relative proportion or number of times higher or lower compares the young workers estimated lost-time injury claim frequency and estimated disabling injury claim frequency and proportion of injuries by each injury type, against the average claim rate and injury proportion for all workers in the province. A value equal to 1 indicates an equal probability or likelihood to the average. A value higher than 1 indicates an increased likelihood of this type of injury occurring, and a value less than one indicates a lower likelihood. See Appendix A for calculation details.

Table 5.3
Source of Injury or Disease - Young Workers, Alberta: 2008

Source of Injury	Lost-Time Claims	%	Disabling Injury Claims	%
Persons, Plants, Animals and Minerals	**1,141**	**20.6%**	**2,630**	**20.5%**
Person - Injured or Ill Worker	761	13.7%	2,026	15.8%
Person - Other Than Injured or Ill Worker*	186	3.4%	268	2.1%
Minerals - Metallic or Nonmetallic (except fuel)	31	0.6%	79	0.6%
Other Persons, Plants, Animals & Minerals	163	2.9%	257	2.0%
Parts and Materials	**790**	**14.2%**	**2,262**	**17.6%**
Structures and Surfaces	**856**	**15.4%**	**1,683**	**13.1%**
Containers**	**626**	**11.3%**	**1,378**	**10.7%**
Tools, Instruments and Equipment	**534**	**9.6%**	**1,420**	**11.0%**
Hand tools - Nonpowered	296	5.3%	813	6.3%
Hand tools - Powered	58	1.0%	161	1.3%
Other Tools and Equipments	180	3.2%	446	3.5%
Vehicles	**438**	**7.9%**	**828**	**6.4%**
Machinery	**400**	**7.2%**	**771**	**6.0%**
Furniture and Fixtures	**198**	**3.6%**	**386**	**3.0%**
Chemicals and Chemical Products	**89**	**1.6%**	**167**	**1.3%**
Other Sources	**318**	**5.7%**	**691**	**5.4%**
Source of Injury - Unknown	**160**	**2.9%**	**639**	**5.0%**
Total	**5,550**	**100.0%**	**12,855**	**100.0%**

* Person – other than injured or ill worker: classifies workplace injuries or illnesses inflicted by family members as well as non-family relations, including co-workers, former co-workers, and patients.
** Containers: classifies receptacles that are commonly used to hold, store or carry materials (examples: dishes, cups and glasses, luggage, etc.).
Data Source: WCB Data, Prepared by Data Development and Evaluation

Type of Event or Exposure

Type of event or exposure describes the incident or event that occurred at the time of the exposure that directly resulted in the injury or disease. The two most common types of events or exposures involving young workers were contact with objects and equipment, accounting for 36.8% of lost-time claims and 39.4% of disabling injury claims, and bodily reaction and exertion, 33.7% and 36.7% (see Table 5.4). Among workers of all ages[15], contact with objects and equipment represented 25.3% of lost-time claims and 30.1% of disabling injury claims submitted. Injuries and diseases caused by bodily reaction and exertion were more common and accounted for 41.4% and 42.6% of the total lost-time claims and disabling injury claims.

In 2008, injuries involving struck by object displayed the highest relative proportions[16] of lost-time claims and disabling injury claims for young workers than the average for all workers. Struck by object had relative proportions 1.6 times and 1.7 times higher than the average for all workers respectively. Other contact with object/equipment had relative proportions 1.6 times higher for both lost-time claims and disabling injury claims and caught in object displayed relative proportions 1.5 and 1.7 times higher than the average for all workers for lost-time claims and disabling injury claims.

[15] See the *Occupational Injuries and Diseases in Alberta 2008 Summary*.

[16] The relative proportion or number of times higher or lower compares the young workers estimated lost-time injury claim frequency and estimated disabling injury claim frequency and proportion of injuries by each injury type, against the average claim rate and injury proportion for all workers in the province. A value equal to 1 indicates an equal probability or likelihood to the average. A value higher than 1 indicates an increased likelihood of this type of injury occurring, and a value less than one indicates a lower likelihood. See Appendix A for calculation details.

Table 5.4
Type of Event or Exposure - Young Workers, Alberta: 2008

Type of Event or Exposure	Lost-Time Claims	%	Disabling Injury Claims	%
Contact with Objects or Equipment	**2,041**	**36.8%**	**5,065**	**39.4%**
Struck by Object	1,115	20.1%	2,620	20.4%
Caught in Object	351	6.3%	1,035	8.1%
Struck against Object	334	6.0%	852	6.6%
Rubbed or Abraded	96	1.7%	204	1.6%
Other Contact with Object/Equipment	145	2.6%	354	2.8%
Bodily Reaction or Exertion	**1,870**	**33.7%**	**4,718**	**36.7%**
Overexertion	1,047	18.9%	2,530	19.7%
Bodily Reaction*	589	10.6%	1,493	11.6%
Repetitive Motion	133	2.4%	416	3.2%
Other Bodily Reaction/Exertion	101	1.8%	279	2.2%
Falls	**859**	**15.5%**	**1,651**	**12.8%**
Fall on Same Level	489	8.8%	987	7.7%
Fall to Lower Level	290	5.2%	493	3.8%
Other Falls	80	1.4%	171	1.3%
Exposure to Harmful Substances	**327**	**5.9%**	**600**	**4.7%**
Transportation Accidents	**274**	**4.9%**	**456**	**3.5%**
Assaults and Violent Acts	**93**	**1.7%**	**125**	**1.0%**
Assaults and Violent Acts by Person(s)	63	1.1%	81	0.6%
Other Assaults and Violent Acts	30	0.5%	44	0.3%
Fires and Explosions	**17**	**0.3%**	**24**	**0.2%**
Other Events or Exposures	**0**	**0.0%**	**2**	**<0.1%**
Type of Event - Unknown	**69**	**1.2%**	**214**	**1.7%**
Total	**5,550**	**100.0%**	**12,855**	**100.0%**

* Bodily reaction: injuries or illnesses resulting from a single incident of free bodily motion which imposed stress or strain on some part of the body.
Data Source: WCB Data, Prepared by Data Development and Evaluation

Duration of Disability

Duration of disability[17] is intended to reflect the severity of the effects of occupational injury and disease as reflected by the number of days off work. The efforts of employers to introduce modified work programs also impact workdays lost.

In 2008, 51.6% of the lost-time claims from young workers had duration of disability of five days or less compared to 40.9% for all workers[18]. Claims by young workers with duration of 31 or more days, represented 12.9% of all lost-time claims, compared to 20.5% for all workers in the province (see Table 5.5). Lost-time claims from workers of all ages typically had longer durations of absence, indicative of quicker recovery times for younger workers.

Table 5.5
Duration of Disability - Young Workers, Alberta: 2007 - 2008

Duration of Disability	2007		2008	
	Lost-Time Claims	%	Lost-Time Claims	%
1 - 5 Days	3,445	51.8%	2,863	51.6%
6 - 10 Days	1,034	15.6%	810	14.6%
11 - 15 Days	476	7.2%	434	7.8%
16 - 20 Days	283	4.3%	248	4.5%
21 - 30 Days	354	5.3%	307	5.5%
31 Days or more	888	13.4%	718	12.9%
Unspecified	166	2.5%	170	3.1%
Total	6,646	100.0%	5,550	100.0%

Data Source: WCB Data, Prepared by Data Development and Evaluation

[17] The duration of disability refers to the length of time, in days, for which the worker receives wage compensation from the WCB.
[18] See the *Occupational Injuries and Diseases in Alberta 2008 Summary*.

OCCUPATIONAL FATALITIES

In 2008, the WCB accepted eight fatalities from workers aged 15 to 24, accounting for 4.8% of all 166 fatalities in the province.

A WCB accepted occupational fatality is defined as the death of a worker, resulting from a work-related incident or exposure, which has been accepted by the WCB for compensation. The WCB classifies occupational fatalities into three general types:

Motor Vehicle Incidents

Motor vehicle incidents typically involve non-industrial vehicles operating on public roads in which the fatally injured worker was either the driver or a passenger. This type of occupational fatality also includes cases involving aircraft, train, helicopter and water vehicle crashes. Between 2004 and 2008, there were 17 motor vehicle incident fatalities accepted by the WCB from young workers aged 15 to 24 (see Table 6.1).

Workplace Incidents

Workplace incidents consist of cases in which the worker died at a worksite or as a result of injuries sustained at a worksite. This is the type of fatality that E&I typically investigates. Between 2004 and 2008, there were 26 workplace incident fatalities accepted by the WCB from young workers aged 15 to 24 (see Table 6.1).

Latent Workplace and Motor Vehicle Fatalities

Latent fatalities consist of workers who were involved in a workplace incident or exposure, or a motor vehicle incident that did not become a fatality until a much later date, often years later. These incidents were classified as occupational diseases. From 2002, these incidents are included with either motor vehicle or workplace incident categories in accordance to their original injury.

Usually, other contributing factors cause a latent fatality, although these contributing factors are the result of the initial injury or exposure. A motor vehicle incident where a worker received leg injuries requiring surgery is a good example of this. Complications during the surgery result in a blood clot causing a fatal stroke. The injury is classified latent because the original injury caused the requirement for surgery. Between 2004 and 2008, there were four latent workplace incident fatalities accepted by the WCB from workers who were aged 15 to 24 when the original incident or exposure occurred.

Occupational Disease

Occupational disease fatalities consist mostly of recognized occupational disease, that is, disease known to be primarily or exclusively work-related such as asbestosis and coal workers' pneumoconiosis. This category also includes heart attacks suffered on the job. Occupational diseases are frequently diagnosed several years after the initial or crucial exposure to the toxic substance, and in such cases, it is difficult to determine when the fatal exposure occurred. *The occupational disease category, therefore, should not be interpreted to reflect present worksite hazardous conditions or exposures.*

Each year, the WCB accepts occupational disease fatality claims for compensation. Occupational disease fatality claims that were accepted in a particular year often include fatalities from prior years. Between 2004 and 2008, there were no occupational disease fatalities accepted by the WCB from workers who were aged 15 to 24 when the original incident or exposure occurred.

Table 6.1
Types of Occupational Fatalities Accepted by the WCB - Young Workers, Alberta: 2004 - 2008

Year	Motor Vehicle Incident		Workplace Incident		Total
	Number of Fatalities	%	Number of Fatalities	%	
2004	5	38.5%	8	61.5%	13
2005	3	30.0%	7	70.0%	10
2006	2	50.0%	2	50.0%	4
2007	4	50.0%	4	50.0%	8
2008	3	37.5%	5	62.5%	8
Total	**17**	**39.5%**	**26**	**60.5%**	**43**

Data Source: 2008 WCB Data, Prepared by Data Development and Evaluation

From 2004 to 2008, the WCB accepted 43 fatalities from workers aged 15 to 24. The Construction and Construction Trade Services sector had the most with 14 fatalities, the majority of these being workplace incidents (see Table 6.2). Transportation, Communication and Utilities sector had 11 fatalities. Agriculture and Forestry reported zero young worker fatalities over the past five years. However, much of the agricultural sector falls outside the jurisdiction of the WCB and is not included in these figures (see Note 6.1).

Note 6.1
In 2008, Alberta Agriculture, Food and Rural Development reported 19 farm related fatalities. Six of these involved machinery. One of the deceased was a child who was shot by a brother who was cleaning his gun. *(Agri-News, 2009).*

Table 6.2
Occupational Fatalities Accepted by the WCB by Industry Sector - Young Workers, Alberta: 2004 - 2008

Sector	Motor Vehicle Fatalities	Workplace Incident Fatalities	Total	%
Mining and Petroleum Development	3	5	8	18.6%
Manufacturing, Processing and Packaging	2	3	5	11.6%
Construction and Construction Trade Services	3	11	14	32.6%
Transportation, Communication and Utilities	6	5	11	25.6%
Wholesale and Retail	0	1	1	2.3%
Public Administration, Education and Health Services	2	1	3	7.0%
Business, Personal and Professional Services	1	0	1	2.3%
Total	**17**	**26**	**43**	**100.0%**

Data Source: WCB Data, Prepared by Data Development and Evaluation

From 2004 to 2008, young workers aged 20 to 24 accounted for 34 occupational fatalities or 4.8%. Workers aged 15 to 19 accounted for nine occupational fatalities or 1.3% (see Table 6.3). In 2008, workers aged 20 to 24 represented 10.5% of those in employment and workers aged 15 to 19, 6.5% of those in employment.

Table 6.3
Occupational Fatalities Accepted by the WCB by Age Group - Young Workers, Alberta: 2004 - 2008

Year	15-19 years	20-24 years	15-24 years
2004	4	9	13
2005	2	8	10
2006	1	3	4
2007	0	8	8
2008	2	6	8
Total	**9**	**34**	**43**

Data Source: WCB Data, Prepared by Data Development and Evaluation

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APPENDIX A: TERMS, DEFINITIONS AND FORMULAS

Lost-Time Claim

A lost-time claim (LTC) is a claim for an occupational injury or disease that causes the worker to have time away from work beyond the day of injury. Included are claims receiving reimbursement of full or partial lost wages due to occupational illness or injury, or payment for permanent loss of function.

Modified Work Claim

A modified work claim is a claim for an occupational injury or disease where workers had their normal work duties altered to enable them to remain working without losing time from work. Also included are claims where injured workers are helped back into the workplace with modified duties after time lost due to injury or disease.

Disabling Injury Claim

Disabling injury (DI) claims combine both the lost-time and modified work concepts to produce an overall figure where an occupational injury or disease disables the worker causing either time-lost from work or for their normal work duties to be modified.

Person-Years Worked

Person-years worked are estimates calculated from wage and payroll data provided by account holders to the WCB. Alberta Employment and Immigration uses data to estimate an average industry wage, and uses the average industry wage and employer payroll data to estimate person-years worked for each employer and each industry. One person-year is equivalent to one full-time worker working for one year, and can be assumed to equal 2,000 hours worked.

Lost-Time Claim Rate

The lost-time claim rate is calculated by dividing the number of lost-time claims by the person-year estimate, and multiplying the result by 100. The lost-time claim rate represents the probability or risk of an injury or disease to a worker during a period of one year's work, which will result in time lost from work. Comparisons of lost-time claim rates between industries, or between years, can be used to indicate increases, decreases, or differences in this risk.

$$\text{LTC Rate} = \frac{\text{Number of LTC's}}{\text{Person-years worked}} \times 100$$

Disabling Injury Rate

The disabling injury rate is calculated by dividing the number of disabling injury claims by the person-year estimates, and multiplying the result by 100. The disabling injury rate represents the probability or risk of a disabling injury or disease to a worker during a period of one year of work. The disabling injury rate is similar to the lost-time claim rate although it covers a broader range of injuries, including those that are less severe in nature (do not require time away from work). The rate represents the number of claims per 100 person-years worked and includes claims made for both lost-time and modified work.

$$\text{Disabling Injury Rate} = \frac{\text{Number of DI's}}{\text{Person-years worked}} \times 100$$

Duration (Days lost)

The duration of disability is the number of days following the injury or disease for which the worker was disabled and unable to perform normal work duties. This information is obtained for this report from data on compensation days paid on each claim from the WCB. Alberta Employment and Immigration obtains these data on March 31 of the year following the claim year, and does not update the information, even though many injured workers continue to be disabled beyond this date. As a result, the duration information reported here underestimates the true impact of lost-time injury and disease.

Duration Rate

The duration rate is calculated by dividing the number of workdays lost (disability days) by the person-year estimate, and multiplying by 100. The result is expressed as days lost per 100 person-years worked, and indicates, in part, the economic impact of occupational injury and disease. Duration rates are not recommended as reliable indicators of full economic cost. In addition, readers are warned that duration rates are highly unstable when based on only a few lost-time claims; it is recommended that the duration rate not be calculated based upon fewer than 30 lost-time claims.

$$\text{Duration Rate} = \frac{\text{Disability Days}}{\text{Person-years worked}} \times 100$$

Industry Coverage

About 80% of employed persons in Alberta are covered by WCB. This report focuses on all industry activity in Alberta covered by the WCB and by the provincial legislation for occupational health and safety. Most industry sectors are included but notable exceptions consist of the Government of Canada, and parts of the agriculture and finance sectors. Several professional groups (i.e. the teaching and medical professions) are also excluded as are some industries where WCB coverage is not compulsory.

WCB Accepted Fatality

An occupational fatality is the death of a worker which resulted from a work-related incident or exposure and which has been accepted by the WCB for compensation. A fatality is counted in the year it is accepted.

Fatality Rate

The fatality rate is calculated by dividing the number of accepted fatalities by the person-years worked estimate and multiplying the result by one million. The result is expressed as fatalities per million person-years worked. Fatalities that are found under the jurisdiction of the Government of Canada are excluded before the calculation of the fatality rate.

$$\text{Fatality Rate} = \frac{\text{Number of Fatalities}}{\text{Person-years worked}} \times 1{,}000{,}000$$

Number of Times Higher/Lower than the Provincial Average

The number of times higher/lower than the provincial average is used to compare the performance of young workers with all workers regarding a specific injury or disease. A number less than one indicates that the injury of the industries is lower than the provincial average; if equal to one it indicates the injury of the industries is the same as the provincial average and a number greater than one indicates that the injury of the industries is higher than the provincial average.

$$\frac{\text{Per cent of Total Claims for young workers} \times \text{Estimated LTC frequency rate for young workers}}{\text{Per cent of Total Claims for all workers} \times \text{Provincial LTC Rate}}$$

Where:

$$\text{Per cent of Total Claims for young workers} = \frac{\text{Number of LTCs for young workers (e.g. back injury)}}{\text{Total LTCs for young workers}} \times 100$$

$$\text{Per cent of Total Claims for all workers} = \frac{\text{Number of LTCs for all workers (e.g. back injury)}}{\text{Total LTCs for all workers}} \times 100$$

Labour Force Survey

The Labour Force Survey (LFS) is a household survey carried out monthly by Statistics Canada. The objectives of the LFS have been to divide the working-age population into three mutually exclusive classifications - employed, unemployed, and not in the labour force - and to provide descriptive and explanatory data on each of these categories. Data from the survey provide

information on major labour market trends such as shifts in employment across industrial sectors, hours worked, labour force participation and unemployment rates.

For the most part, annual LFS data has been analyzed alongside injury and disease information to aid the understanding of injury risk or frequency by worker type. The LFS uses a different industry classification from WCB, although there are similarities in structure. Where possible, the two data sources are used comparably and proportions (of totals) have been used to evaluate information generated from both sources. Using proportions attempts to overcome obvious distortions in the numbers in employment from both sources, although the impact on the proportions from industry coverage differences is unclear. In certain instances, monthly LFS micro-data files have been combined and used to produce proportion estimates for the whole year for particular sub-groups of the population.

For further information on the LFS, please see
http://www.employment.alberta.ca/BI/2599.html

CONTACT INFORMATION

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http://employment.alberta.ca

Work Safe Alberta website:

www.worksafely.org

Occupational Health and Safety Contact Centre:

Telephone: 780-415-8690, toll free by calling 1-866-415-8690

http://www.employment.alberta.ca/SFW/2874.html

Certificate of Recognition (COR) Program:

http://www.employment.alberta.ca/SFW/334.html